EAGLE HATCHERY ANNUAL REPORT

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by

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ABSTRACT

Eagle Hatchery reared and stocked 369,425 rainbow trout, 176,222 brown trout, 55,394 brook trout and 21,045 kokanee salmon. Total weight of fish produced was 11,348 lbs. All species were released as fingerling with the exception of 236 broodstock rainbow (Arlee strain).

The source of broodstock kokanee was changed from Anderson Ranch Reservoir to the Deadwood River upstream of Deadwood Reservoir. Egg take was 67,000. Fecundity rate averaged 563 eggs per female. Eye-up rate was 68.21.

The temporary Fish Health Laboratory is now accommodated by Residence No. 1.

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INTRODUCTION

Eagle Hatchery is a state-owned salmonid rearing facility located 12 miles west of Boise, Idaho. Elevation is 2,520 ft. This "high visibility" station provided guided tours to area groups involving nearly 2,000 people. Visitors numbered over 6,000.

The water supply includes 7 artesian wells, yielding a flow of 1.9 cfs of 56°F water. Water quality is supersaturated with nitrogen and relatively low in dissolved oxygen.

Built in 1938, the hatchery building houses the incubation facility, which consists of 5 double-high Heath stacks and 16 early rearing vats, 14.5 ft. x 2.25 ft. x 1.5 ft. An additional 7 vats exist, but these cannot be used due to low flows to hatchery building (160 gpm).

Rearing units outside consist of: 4 small raceways, 50 ft. x 6 ft. x 1.6 ft.; 8 large raceways, 138 ft. x 5.5 ft. x 1.5 ft.; and 1 horseshoe pond, 400 ft. x 30 ft. x 2.25 ft. Approximately half of this rearing space is available for production.

A settling pond, 150 ft. x 40 ft. x 1.6 ft., receives flows from the hatchery and outside rearing units.

Other features of Eagle Hatchery include: two residences (1 houses the superintendent, the other houses the Fish Health Laboratory), one office-warehouse building, one shop and maintenance building and one 1975 1/2-ton Dodge pickup truck.

OBJECTIVES

1. To raise to fingerling size approximately 370,000 rainbow trout, 180,000 brown trout, 60,000 brook trout and 20,000 kokanee salmon.

2. To stock these fish in lakes, streams and reservoirs of the state.

3. To trap and spawn adult kokanee salmon at Deadwood Reservoir.

FISH PRODUCTION

Kokanee Salmon

Kokanee salmon are usually the primary species reared. Due to a poor 1985 run at Anderson Ranch Reservoir, 43,723 eggs were taken from

adults trapped at the Pine trap. Survival from green eggs to stocking was 48.12. Lucky Peak Reservoir was stocked with the resultant 21,045 fingerlings weighing 222 lbs.

Rainbow Trout

Arlee strain broodstock rainbow from Ennis National Fish Hatchery in Montana were held on station. A total of 549,000 eggs were taken. The adults were stocked in Lucky Peak Reservoir. Production from the egg take totaled 6,085 lbs. and 369,189 fish. Survival rate from egg to plant-out was 67.22. The fingerlings were also stocked into Lucky Peak Reservoir.

Brown Trout

Two sources of brown trout eggs were received at Eagle. Saratoga National Hatchery provided 189,000 eyed eggs and a commercial hatchery (Plymouth Rock, Mass.) provided 400,000 eyed eggs. There were 176,222 fingerlings weighing 2,811 lbs. stocked into area waters. Overall survival rate was 302.

Brook Trout

The Ford Hatchery in Washington supplied 125,000 eyed brook trout eggs. State waters and Clark Fork Hatchery received 55,394 fingerlings weighing 930 lbs. Survivability from egg to plant-out was 44%.

SPAWNTAKING OPERATIONS

After a poor run in 1985, the kokanee trapping operation site was changed to the Deadwood River. The 1986 egg take for early run kokanee came from Deadwood River. Weir frames from Clark Fork Hatchery and pickets from McCall Hatchery were used to construct a trap above the Forest Service velocity barrier on the Deadwood River. This trap yielded an egg take of 67,000 eggs. The 1987 trap results could be greatly enhanced by installing the trap below Wild Buck Creek. Adults trapped this year totaled 700. Lengths averaged 13.47 in. for females and 14.16 in. for males. Fecundity averaged 563 eggs per female and eggs averaged 261 per oz.

FISH HEALTH

Most losses occurred during incubation and early rearing. Brown trout, until they exceed 170 per lb., seem to be especially sensitive

to the high levels of dissolved gases (105.7 total dissolved gas) in the water source. The scenario seems to be bulging of the eye, another fish will pick it out; bacteria attack the orbit; and the fish goes off feed, turns dark, and dies.

Inspections for viral and bacterial diseases on the Deadwood kokanee yielded negative results. Fish at release were in great condition.

FISH TRANSFERS

Table 1. Fish transfers.

Species	Number	Pounds	Destination
Rainbow	138,000	1,150	Hagerman
Rainbow	30,664	1,060	Nampa
Rainbow	108,750	750	Nampa
Brook	24,930	366	Clark Fork

FISH RELEASES

This year, Eagle Hatchery stocked 622,086 salmonids totaling 11,348 lbs. Rainbow (Arlee strain), brown and brook trout, as well as kokanee salmon, were stocked. State waters stocked are: Boise River, Weiser River, Payette River, Palouse River, Sand Creek ponds, South Boise drain, Mason drain, Wilson drain, Logger Creek and Lucky Peak Reservoir.

The Boise River received its allotment late, as flows in the 6,500 cfs range were allowed to subside before stocking. The Weiser River was stocked late for the same reason.

Recognition should be given to the Nampa Hatchery personnel for their cooperation in providing transportation trucks in a timely manner despite their own busy stocking schedule.

FISH FEED USED

Dry diets were used exclusively at Eagle this year. A total of 11,650 lbs. were fed at a cost of $4,396.82. Cost of feed used per pound of fish produced was $0.241. Conversion varied with species, rearing units and size; and ranged from 0.85 to 3.35.

HATCHERY IMPROVEMENTS

The line feeding the degasification tower for the hatchery was replaced. Also, the old freezer compressor unit was reworked.

MISCELLANEOUS ACTIVITIES

A presentation on Eagle Hatchery and the Idaho Department of Fish and Game hatchery system was given to the Boise Lions Club.

The hatchery provided a holding area for a fish salvage project on the outlet canal of Lake Lowell. These fish, predominately warmwater species, were stocked in Mud Lake of eastern Idaho.

HATCHERY NEEDS

Eagle needs to have the water supplies degassed and flow increased to put existing facilities into effective production.

ACKNOWLEDGEMENTS

Hatchery staff during the fish year included: Bob Esselman, Fish Hatchery Superintendent I; Mel Sadecki, Fish Hatchery Superintendent I; Elaine Rippey, Bio-Aide; Ken Taylor, Fish Transportation Operator; and Ty Myers, Bio-Aide.

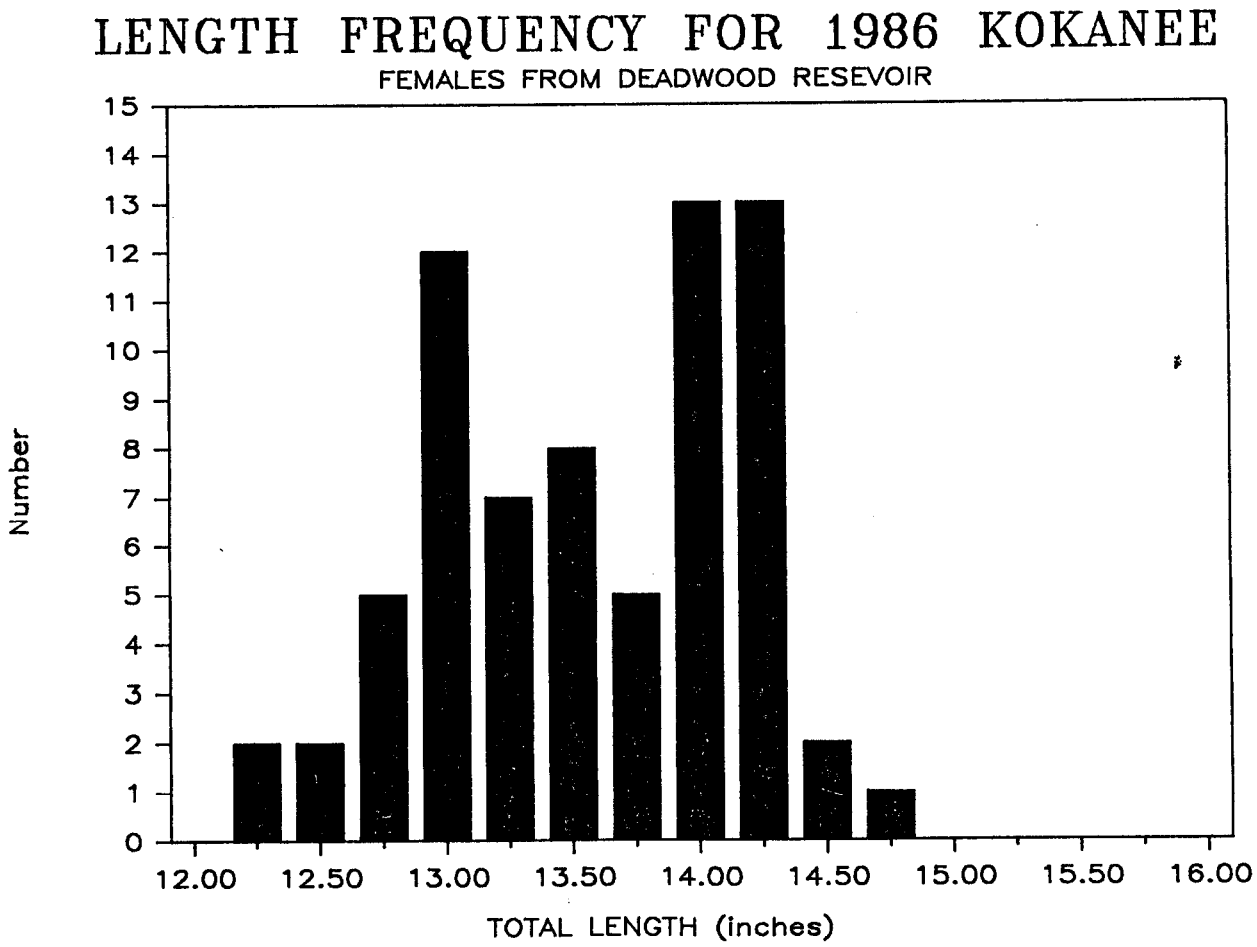

Figure 1. Length frequency for 1986 kokanee (females).

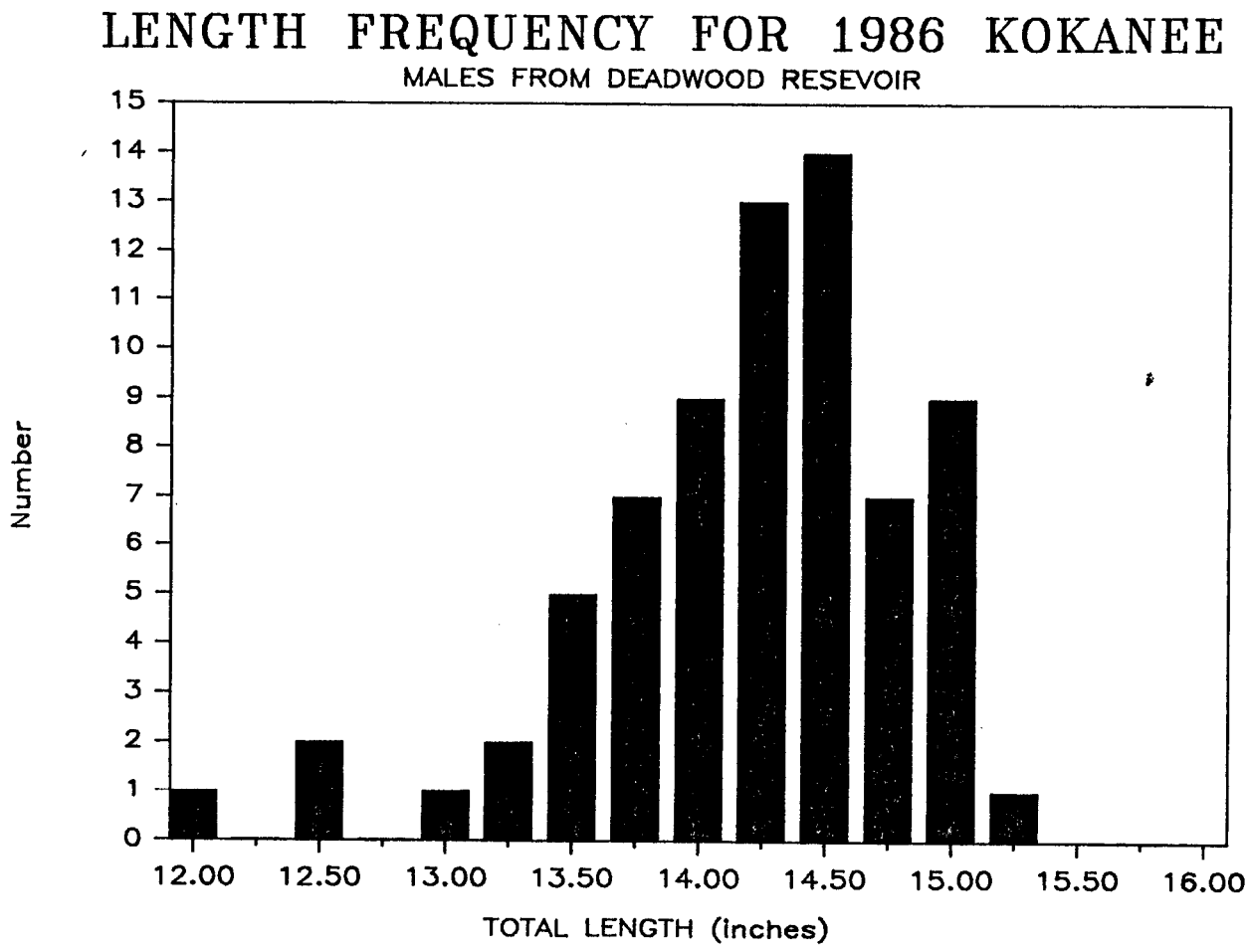

Figure 2. Length frequency for 1986 kokanee (males).

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